

REMARKS

Claims 1-24 and 28-32 are pending in this application. By this Amendment, claim 1 is amended and claim 32 is added. Non-elected claims 8, 19 and 21-24 have been withdrawn from consideration by the Examiner. Support for the amendments to the claims and new claim may be found, for example, in the original claims and in the specification at page 5, lines 26-37 and page 10, lines 2-18. No new matter is added. In view of the foregoing amendments and following remarks, reconsideration and allowance are respectfully requested.

I. Rejection Under 35 U.S.C. §103

The Office Action rejects claims 1-7, 9-18 and 20 under 35 U.S.C. §103(a) over WO 98/48783 to Ottoboni et al. (hereinafter "Ottoboni") in view of FR2794763 to Dellacherie et al. (hereinafter "Dellacherie") and U.S. Patent No. 4,904,479 to Illum (hereinafter "Illum"). Applicants respectfully traverse the rejection.

By this Amendment, independent claim 1 is amended to even more clearly distinguish over the applied references. Specifically, independent claim 1 is amended to recite (emphasis added):

A particle in which the core comprises at least one biodegradable organosoluble polymer, characterized in that it is partially or entirely surface-coated with a hyaluronan-based coating composition consisting of at least one hyaluronan or one of its derivatives, said hyaluronan being a water-soluble amphiphilic hyaluronan, carboxylic functions of which are in part converted so as to form hydrophobic groups, wherein the hydrophobic groups are anchored in the polymeric core of the particle.

The applied references disclose no such combination of features or otherwise establish any reason or rationale as to why one of ordinary skill in the art at the time of the invention would have modified the teachings of the applied references to arrive at the subject matter of claim 1.

Ottoboni discloses microparticles of the core-shell type having a core that comprises an active substance, a shell that is an inner layer (biodegradable polymer) and an outer layer of a biologically compatible material absorbed on the surface of the inner layer. However, the outer layer is unstable and Ottoboni teaches that a crosslinking agent is added to the mixture to react with the biomaterial envelope and rendering it insoluble, stabilizing the outer wall (emphasis added). See Ottoboni, page 8, lines 21-27; see also Ottoboni, page 6 lines 11-20

Thus, Ottoboni teaches that the interactions of absorbed molecules are not sufficient to secure the molecules to the surface and a further additive is necessary to ensure the securing of the molecule relative to the particle, i.e., to avoid the separation of the molecule from the particle. To accomplish this, Ottoboni teaches adding a crosslinking agent, such as glutaraldehyde, to the mixture (emphasis added). See Ottoboni, page 8, lines 21-27.

Therefore, Ottoboni does not teach or suggest that "surface-coated with a hyaluronan-based coating composition consisting of at least one hyaluronan or one of its derivatives, said hyaluronan being a water-soluble amphiphilic hyaluronan, carboxylic functions of which are in part converted so as to form hydrophobic groups, wherein the hydrophobic groups are anchored in the polymeric core of the particle," as required by claim 1. Dellacherie does not cure the deficiencies of Ottoboni.

The Office Action acknowledges that Dellacherie does not expressly teach the particle composition as being comprised of the biodegradable organosoluble polymers. See Office Action, page 7. Instead, Dellacherie discloses polymers derived from hyaluronic acid for preparing hydrogels, these polymers being obtained by esterification of the carboxylic groups of hyaluronan with hydrophobic aliphatic chains.

Dellacherie also discloses that it is possible to enhance the formation of intramolecular network between the hyaluronan molecules by adding to the mixture a protein solution (emphasis added). See Dellacherie, page 1, lines 15-19 (page 1, fourth paragraph

of the translation). The proteins are similar to a crosslinking agent because it serves to strengthen a network composed of hyaluronan molecules. Thus, similar to Ottoboni, Dellacherie would suggest to one of ordinary skill in the art that a crosslinking agent (proteins) is necessary to ensure the securing of the molecules to each other. Such a crosslinking agent is not a particle "surface-coated with a hyaluronan-based coating composition consisting of at least one hyaluronan or one of its derivatives, said hyaluronan being a water-soluble amphiphilic hyaluronan, carboxylic functions of which are in part converted so as to form hydrophobic groups, wherein the hydrophobic groups are anchored in the polymeric core of the particle," as required by claim 1 (emphasis added).

Illum does not cure the deficiencies of Ottoboni and Dellacherie. Illum discloses a drug delivery system comprising particles coated with a material that can have both hydrophilic and hydrophobic domains. As acknowledged by the Office Action, Illum does not expressly teach that the hydrophobic groups are specifically attached to the hyaluronan. See Office Action, page 8.

Instead (similar to Ottoboni and Dellacherie), displacement of the material on the particle surface in Illum is prevented by an additive or crosslinking agent, here by plasma proteins. See Illum, column 2, line 30. Thus, the applied references teach that there is a need to strengthen the intramolecular network of the material molecules to secure this material on the particle surface. The crosslinking taught by the applied references obviates the need for anchoring the hydrophobic groups in the polymeric core of the particle. Accordingly, one of ordinary skill in the art would have had no reason or rationale to modify the particle of Ottoboni to achieve the claimed particle.

Furthermore, in the Amendment filed December 15, 2008 Applicants argued none of the applied references, considered either separately or combined, teach or suggest or establish any reason or rationale to provide "water-soluble amphiphilic hyaluronan, carboxylic

functions of which are in part converted so as to form hydrophobic groups, wherein the hydrophobic groups are anchored in the polymeric core of the particle," as required by claim 1 (emphasis added). In addition, Applicant's argued that there is a fundamental difference between the anchoring of a molecule in a particle and the adsorption of the molecule on the particle. In the first case, the molecule is more or less engaged in and through the particle core while in the second case, the molecule only extends above the particle (and not inside). In the first case, there is no need of a further additive or reagent to ensure the securing of the molecule relative to the particle because this securing is ensured by the interactions between the molecule and the particle.

With respect to the above arguments and amendments, the Office Action fails to respond to Applicant's arguments.

MPEP § 707.07(f) states that "[i]n order to provide a complete application file history and to enhance the clarity of the prosecution history record, an examiner **must** provide clear explanations of all actions taken by the examiner during prosecution of an application" (emphasis added). "Where the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it" (*Id.*). "The examiner must address all arguments which have not already been responded to in the statement of the rejection" (MPEP § 707.07(f), Examiner Note 1).

Additionally, MPEP § 2143 states that "[t]he key to supporting any rejection under 35 U.S.C. 103 is the **clear articulation** of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit" (emphasis added, see also *KSR Intl Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1395-97 (2007)). While *KSR* and the cited section of the MPEP are directed to obviousness rejections under 35 U.S.C. § 103, it appears that the Supreme Court believes that a clear articulation of reasons is a key to supportable rejections by the USPTO.

The outstanding Office Action failed to address all Applicant's traversals because Office Action has failed to provide proper guidance as where the applied references teach or suggest or establish any reason or rationale to provide "water-soluble amphiphilic hyaluronan, carboxylic functions of which are in part converted so as to form hydrophobic groups, wherein the hydrophobic groups are anchored in the polymeric core of the particle," as required by claim 1 (emphasis added). Accordingly, Applicant is forced to guess which features in the applied references the Examiner believed to disclose each of the claimed features. Thus, because reasons for the rejection were not presented in the Office Action and Applicant cannot reasonably determine why the claimed invention would have been obvious, it is respectfully submitted that the rejection is improper and must be withdrawn.

Thus, for at least the reasons discussed above, Ottoboni, Dellacherie and Illum, considered either separately or combined, do not teach or suggest each and every element of claim 1 and, thus, also would not have rendered obvious claim 1.

Claims 2-7, 9-18 and 20 variously depend from claim 1 and, thus, also would not have been rendered obvious by Ottoboni, Dellacherie and Illum. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

II. New Claim

By this Amendment, new claim 32 is presented. New claim 32 is directed to "A particle in which the core comprises at least one biodegradable organosoluble polymer" having features similar to the features recited in claim 1. New claim 32 is believed to be patentable over the applied references. Prompt examination and allowance of new claims 28-31 are respectfully requested.

III. Rejoinder

Applicants also respectfully request rejoinder of non-elected claims 8, 19, and 21-24. Where restriction was required between independent or distinct products, or between

independent or distinct processes, and all claims directed to an elected invention are allowable, any restriction requirement between the elected invention and any nonelected invention that depends from or otherwise requires all the limitations of an allowable claim should be withdrawn. For example, a requirement for restriction should be withdrawn when a generic claim, linking claim, or subcombination claim is allowable and any previously withdrawn claim depends from or otherwise requires all the limitations thereof. Claims that require all the limitations of an allowable claim will be rejoined and fully examined for patentability in accordance with 37 CFR 1.104.

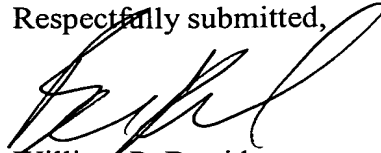
Because the elected product claims are believed to be allowable for at least the reasons presented above, Applicants respectfully request withdrawal of the Restriction Requirement and rejoinder of claims 8, 19, and 21-24.

IV. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachments:

Request for Continued Examination
Petition for Extension of Time
Amendment Transmittal

Date: September 8, 2009

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